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L15: Entry 2 of 16

File: USPT

Oct 31, 2000

DOCUMENT-IDENTIFIER: US 6141005 A

** See image for Certificate of Correction **

TITLE: Combined display of locale-sensitive calendars in a distributed computer enterprise environment

Brief Summary Text (23):

Generalizing, the inventive method defines a plurality of sets of holiday objects, each set of holiday objects corresponding to a set of holidays specific to a respective locale in the distributed computing environment. By selecting among the plurality of sets depending on a locale specified by the user, a locale-specific calendar is then displayed. When the user enters a new locale (and requests a simultaneous display), the system then dynamically refreshes the calendar to include the new set of holiday objects. In this manner, a user may readily view locale-specific schedules of other users in the distributed enterprise (e.g., in different countries) that might impact a given administrative, management or other planning decision.

Detailed Description Text (9):

Preferably, the server and each of the gateways is a computer or "machine." For example, each computer may be a RISC System/6000.RTM. (a reduced instruction set or so-called RISC-based workstation) running the AIX (Advanced Interactive Executive) operating system, preferably Version 3.2.5 or greater. Suitable alternative machines include: an IBM-compatible PC x86 or higher running Novell UnixWare 2.0, an AT&T 3000 series running AT&T UNIX SVR4 MP-RAS Release 2.02 or greater, Data General AViiON series running DG/UX, an HP9000/700 and 800 series running HP/UX 9.00 through HP/UX 9.05. Motorola 88K series running SVR4 version R40V4.2, a Sun SPARC series running Solaris 2.3 or 2.4, or a Sun SPARC series running SunOS 4.1.2 or 4.1.3. Of course, other machines and/or operating systems may be used as well for the gateway and server machines.

Detailed Description Text (22):

The present invention is conveniently implemented in Java. As is known in the art, Java is an object-oriented, multi-threaded, portable, platform-independent, secure programming environment used to develop, test and maintain software programs. These programs include full-featured interactive, standalone applications, as well as smaller programs, known as applets, that executed by a Java virtual machine (JVM). The basic calendar functionality (called UFCalendar for convenience only) preferably is implemented with the currently available Sun Java Development Kit (JDK 1.1.6) and the Java Foundation Classes (JFC 1.0.2). Familiarity with those resources is presumed in the following discussion.

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L15: Entry 3 of 16

File: USPT

Aug 19, 1997

DOCUMENT-IDENTIFIER: US 5659768 A

TITLE: System and method for the time representation of tasks

Brief Summary Text (9):

U.S. Pat. No. 4,937,743 to Rassman et al. describes a method and system for scheduling, monitoring, and dynamically managing a fixed set of resources using a computer system. In the Rassman invention, automated computer support does provide for a data base of information which is displayed relative to a fixed set of resources. While the data base can be updated, the invention does not provide for dynamic update of the information or for an interactive user interface.

Brief Summary Text (10):

U.S. Pat. No. 5,129,057 to Strope et al. relates to a method for presenting electronic day calendar information along with data being processed by an application program. This invention provides for computer-supported display of calendar information simultaneously with information being provided by another application. While useful, this calendar information is not event-schedule oriented nor does it provide for user-interactive dynamic updating.

Brief Summary Text (11):

In all the art cited above, the level of computer-supported interactive manipulation of scheduled events and related data is rudimentary at best and frequently non-existent. The present invention seeks to solve this and other problems by providing for a comprehensive range of event-oriented schedule information to be input, processed, manipulated and displayed. The interactive user interface is truly dynamic and provides for numerous automated updates of linked information as the result of single manipulations. The full range of display options enables tailoring of a product that provides a maximum degree of usefulness to the user. Finally, all supporting data bases are interactively linked to the processing function and accessed via interactive user commands.

Brief Summary Text (21):

The method apparatus of the present invention described above provides the user with an <u>interactive</u>, visually supportive means of interacting with graphical time represented tasks using a wide variety of display, input and pointing capabilities.

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L15: Entry 4 of 16

File: USPT

Feb 25, 1997

DOCUMENT-IDENTIFIER: US 5606391 A

TITLE: Exposure control apparatus for camera

Abstract Text (1):

There is disclosed an exposure control apparatus for a <u>camera</u>, enabling appropriate exposure control for varied photographing situations. The apparatus determines the optimum exposure value, referring to various conditions including the season and time of photographing, photographing location, sunrise/sunset times and so on.

Brief Summary Text (3):

The present invention relates to an exposure control apparatus for <u>camera</u>, and more particularly to determination of exposure in consideration of season or sunrise/sunset time.

Brief Summary Text (5):

Automatic exposure control of a <u>camera</u> is generally achieved by detecting the brightness of an object with a <u>light</u> metering device, determining an exposure value based on said object brightness and the sensitivity of the photographic film used, and driving the diaphragm and the shutter according to said exposure value.

Brief Summary Text (7):

Also a <u>camera</u> incorporating an electronic flash device automatically giving flash in response to the detection of object brightness executes a photographing operation with flash emission automatically to a relatively dark object, for example an object in the evening dusk. For this reason the evening tone intended by the photographer cannot be obtained on the photograph.

Brief Summary Text (11):

An object of the present invention is to provide an exposure control apparatus for use in a <u>camera</u>, enabling appropriate exposure control for various photographing situations.

Drawing Description Text (2):

FIGS. 1 and 2 are respectively front and rear perspective views of a <u>camera</u> constituting a first embodiment of the present invention;

Drawing Description Text (3):

FIG. 3 is a rear view of a camera with a rear cover open;

Detailed Description Text (3):

Referring to FIGS. 1 and 2, on the front face of a <u>camera</u> housing 1 there are provided a lens barrel 3 having a phototaking lens 2, a finder objective lens 4, range-finding windows 5a, 5b for active auto focusing, and a light emitting window 41 for electronic flash. On the front face of the lens barrel 3 there is provided a photosensor 6 for light metering. Said photosensor 6 receives the light in a central area and in a peripheral area of the object field, and converts the light of those areas into electrical signals. On the upper face of the <u>camera</u> housing there are provided a shutter release button 7, a display window 8 of a liquid crystal display for displaying the number of photographed film frames or the set state of various modes, a mode switching button 9 for the electronic flash device, and a mode setting button 10 for setting an exposure correction mode to be explained later.

<u>Detailed Description Text</u> (4):

Also as shown in FIG. 2, a view-finder eyepiece 11 is provided on the rear face of the camera housing 1. Inside a rear cover 12 which can be opened from the camera housing 1, there is provided a data back (not shown) for recording date and time on the film, said data back incorporating a timer circuit for measuring date and time. On the outer face of the rear cover 12 there are provided a display device 13 for displaying the data to be recorded by said data back, push-buttons 14 for selecting the date or time to be recorded or setting such date and time, and a window 15 for reading the film type information printed on the loaded film cartridge.

Detailed Description Text (5):

FIG. 3 shows a state with open rear cover 12. In a film chamber 21 in the <u>camera</u> housing there are provided DX contacts 22, which come into contact with DX code contacts provided on the surface of the film cartridge when it is loaded in the film chamber 21. The DX code contacts are provided for representing film information by the positions of contacts, and are already known. Said film information is data specific to the photographic film, such as the kind of film (negative or reversal) and the film sensitivity.

Detailed Description Text (6):

The <u>camera</u> housing 1 and the rear cover 12 are respectively provided with contacts 23 and contact pins 24, which mutually contact when the rear cover is closed, thereby enabling signal transmission between the above-mentioned data back and a CPU provided in the <u>camera</u> housing. In FIG. 3, there are further shown an exposure aperture 25, a spool 26, and an idler sprocket 27 for film wind/rewinding.

Detailed Description Text (7):

FIG. 4 is a block diagram of the exposure control apparatus for the camera.

Detailed Description Text (8):

To the CPU 31 or controlling the operation of the <u>camera</u>, there are connected a light measuring circuit 32, a range-finder circuit 33, an exposure control circuit 34, a flash control circuit 51 of an electronic flash unit 50, and switches SW1, SW2.

Detailed Description Text (43):

In the foregoing explanation, the correction of the exposure value is based on the season, time and kind of film, but other factors such as color temperature of the object and direction of the <u>camera</u> may be detected for identifying the forward or back lighted condition, thereby enabling more precise exposure correction. Also exposure correction in further consideration of the object distance allows approximate identification whether the object is a person or a scene, thereby providing more accurate correction. Still other factors such as temperature, humidity, air pressure, longitude, latitude etc. may be added in the correction of the exposure value.

Detailed Description Text (48):

There are also provided a <u>camera</u> control circuit C2 for controlling the drive sequence of the <u>camera</u>, and an exposure control device E for controlling the shutter and the diaphragm of the camera.

<u>Detailed Description Text</u> (84):

Also the cumbersome entry of cities may be simplified by inserting, into the <u>camera</u>, one of IC cards representing geographic regions and storing representative locations.

Detailed Description Text (89):

In an exposure control apparatus shown in FIG. 21, a CPU 201 for controlling the operation of the camera, is connected, as in the first embodiment, to an exposure control circuit 202, a light measuring circuit 203 and a timer circuit 204. A calendar 205, in cooperation with the timer circuit 204 provides the CPU 201 with the Greenwich standard time (reference time including month and date) G.M.T. A latitude/longitude setting circuit 206 gives the latitude and longitude of the photographing location in response to the actuation of switches SW25-SW27, while a height-above-sea-level setting circuit 207 sends the height above sea level of the photographing location to the CPU, in response to the actuation of switches SW23, SW24. Switches SW1, SW2 are closed in relation to the actuation of the shutter releasing operation as in the previous embodiments.

Detailed Description Text (129):

FIG. 34 shows another variation of the fourth embodiment, wherein the same components as those in FIG. 30 are represented by the same numbers and will not be explained further. An information recorder 502 shown in FIG. 34 corresponds to the exposure control device 302 in FIG. 30. In this variation, the exposure correction is not conducted at the photographing operation by the camera. Instead, information on exposure correction, corresponding to the exposure correction value, is recorded by said information recorder 502 on a recording medium such as the photographic film itself, or a magnetic recording medium, provided in advance on the film cartridge, and said information is utilized in correcting the exposure at the preparation of a print from the photographic film. In this manner there is obtained a print subjected to exposure correction similar to that in FIG. 30 or 33. This structure is also employable in a recording system such as a still video camera, utilizing a non-photographic recording medium such as a magnetic disk.

Detailed Description Text (130):

FIG. 35 shows still another variation, wherein the same components as those in FIG. 33 are represented by the same numbers and will not be explained further. In FIG. 35, an image luminance signal generator/recorder 602 corresponds to the exposure control device 302 in FIG. 33. This variation is primarily designed, for example, for a video camera rather than an ordinary camera, and is adapted to correct the image luminance signal instead of the exposure value.

<u>Detailed Description Text</u> (132):

The fifth embodiment described below is designed to obviate such an inconvenience. More particularly, the fifth embodiment is so constructed that, when it is judged that no date is changed by a time difference correction, a fact that time has been corrected by the time difference correction may be displayed during predetermined time. Since the <u>camera</u> structure adopting the fifth embodiment is the same as shown in FIG. 7, only display modes and a control operation by a control circuit will be described.

Detailed Description Text (142):

In FIG. 45, the time display mode may be executed only in the case where no day display is changed by the time difference correction. The above mentioned embodiments may be so constructed that, in synchronization with start of manual operation for the time difference correction, change may be made to time display mode and simultaneously with the end of the operation returning to the calendar display mode may be effected.

CLAIMS:

- 1. An exposure control apparatus for a camera provided with a flash unit, comprising:
- an exposure value determining portion which determines an exposure value according to the luminance of an object;
- a flash unit controlling portion which controls said flash unit so as to effect a photographing operation with flash emission when said object luminance is equal to or less than a predetermined level;
- a time information supplying circuit which supplies information on time;
- a discriminating portion which discriminates whether the current time is a twilight time, based on said time information; and
- an adjusting portion which reduces said predetermined level of luminance by a predetermined amount when the current time is identified as a twilight time.
- 2. An exposure control apparatus for a camera provided with a flash unit, comprising:
- a luminance detector which detects luminance of an object;
- a flash unit controlling portion which controls said flash unit so as to effect a photographing operation with flash emission when said object luminance is equal to or less than a predetermined level;

- a discriminating portion which discriminates whether a photographing situation is indoors or outdoors;
- a time information supplying circuit which supplies information on time;
- a twilight discriminating portion which discriminates whether the current time is a twilight time, based on said time information; and
- an adjusting portion which reduces said predetermined level of luminance by a predetermined amount, when the photographing situation is identified as outdoors and in the twilight time.
- 3. An exposure control apparatus for a camera provided with a flash unit, comprising:
- a luminance detector which detects luminance of an object;
- a flash unit controlling portion which controls said flash unit so as to effect a photographing operation with flash emission when said object luminance is equal to or less than a predetermined level;
- a discriminating portion which discriminates whether a photographing situation is indoors or outdoors;

timer circuitry which supplies information on time and information on date;

geographical information circuitry which supplies geographical information;

- a sunrise/sunset time determining portion which determines sunrise time and sunset time based on said date information and said geographical information;
- a discriminating portion which discriminates whether the current time is a twilight time, based on said time information and said sunrise/sunset times; and
- an adjusting portion which reduces said predetermined level by a predetermined amount, when the photographing situation is identified as outdoors and in the twilight time.
- 4. An exposure control apparatus for a camera, comprising:
- a luminance information generating portion which generates electrical luminance information corresponding to a luminance of an object;
- a season information supplying portion which supplies electrical season information corresponding to information of a season; and
- an exposure value determining portion which determines exposure value for an object based on said luminance information and said season information.
- 5. An exposure control apparatus for a camera, comprising:
- a luminance information generating portion which generates electrical luminance information corresponding to a luminance of an object;
- a season information generating portion having an electrical time counter and generating electrical season information indicative of the current season based on the counted time; and
- an exposure value determining portion which determines exposure value based on said luminance information and said season information.
- 6. An exposure control apparatus for a camera, comprising:
- a luminance information generating portion which generates electrical luminance information corresponding to a luminance of an object;

a summer season information generating portion having an electrical time counter and generating electrical summer information based on the counted time if it is summer; and

an exposure value determining portion which determines exposure value based on said luminance information and said summer season information.

- 7. An exposure control apparatus for a camera, comprising:
- a luminance information generating portion which generates electrical luminance information corresponding to a luminance of an object;
- a winter season information generating portion having an electrical time counter and generating electrical winter season information based on the counted time if it is winter; and

an exposure value determining portion which determines exposure value based on said luminance information and said winter season information.

- 8. An exposure control apparatus for a camera, comprising:
- a luminance information generating portion which generates electrical luminance information corresponding to a luminance of an object;
- a time information generating portion which counts time electrically and generates electrical time information indicative of the current time; and

an exposure value determining portion which determines exposure value for an object based on said luminance information and said time information.

- 9. An exposure control apparatus for a camera, comprising:
- a luminance information generating portion which generates electrical luminance information corresponding to a luminance of an object;
- a twilight discriminating portion having an electrical time counter, and which discriminates whether it is twilight based on the counted time and generates electrical twilight information when it is twilight; and

an exposure value determining portion which determines an exposure value for an object to be a predetermined value under in comparison with an exposure value at non-twilight time, when said twilight information is received.

- 10. An exposure control apparatus for a camera, comprising:
- a luminance information generating portion which generates electrical luminance information corresponding to a luminance of an object;
- a date information generating portion which counts time electrically and generates electrical date information indicative of the current date;
- a geographical information generating portion which generates electrical phototaking place information which is information indicative of a phototaking place on the Earth;
- a date information correcting portion to correct said date information based on said phototaking place information;
- a season recognizing portion which recognizes current season based on said date information and said phototaking place information and based on the corrected date information and said phototaking place information, and generating electrical season information indicative of the recognized season; and

an exposure value determining portion which determines an exposure value against an exposure value for an object based on said luminance information and said season

information.

- 11. An exposure control apparatus for a camera, comprising:
- a luminance information generating portion which generates electrical luminance information corresponding to a luminance of an object;
- a geographic information generating portion which generates electrical phototaking place information indicating a phototaking place on the Earth;
- a time information generating portion which counts time electrically and generates electrical time information indicative of the current time;
- a time information correcting portion which corrects said time information to a time of the place indicated by said phototaking place information based on said phototaking place information;
- a twilight information generating portion which produces twilight information relating to sunrise and sunset times based on said phototaking place information and the corrected time information; and

an exposure value determining portion which determines exposure value based on said luminance information and said twilight information.

- 12. An exposure control apparatus for a camera, comprising:
- a luminance information generating portion which generates electrical luminance information corresponding to a luminance of an object;
- a reference time generating portion which electrically counts a reference time and generates reference time information indicative of a current reference time;
- a photographing location designating portion which designates latitude and longitude of the photographing location and which generates latitude information and longitude information corresponding to the designation;
- a height-of-sun calculating portion which calculates the current height of the sun based on said latitude information, said longitude information and said reference time information; and

an exposure value determining portion which determines exposure value based on said luminance information and said height of the sun.

- 13. An exposure control apparatus for a camera, comprising:
- a luminance detector which detects a luminance of an object;
- a film information detecting portion which detects information on a film which is loaded in the camera;
- a timer circuit which supplies information on date and time;
- a twilight discriminating portion which discriminates whether or not a current time is a twilight time, based on said date and time information; and

an exposure value determining portion which determines an exposure value based on said luminance information, said film information and a discrimination result of said twilight discriminating portion.

- 18. An exposure control apparatus for a camera, comprising:
- a luminance detecting portion which detects a luminance of an object;
- a film information detecting portion which detects information on a film loaded in the camera;

a season information determining portion which determines information on season; and an exposure value determining portion which determines an exposure value based on said luminance information, said film information and said season information.

23. An exposure control method of a camera provided with a flash unit, comprising:

determining an exposure value according to the luminance of an object;

supplying information on time;

discriminating whether the current time is a twilight time, based on said time information;

controlling said flash unit so as to effect a photographing operation with flash emission when said object luminance is equal to or less than a predetermined level; and

reducing said predetermined level of luminance by a predetermined amount when the current time is identified as a twilight time.

24. An exposure control method of a camera provided with a flash unit, comprising:

detecting luminance of an object;

discriminating whether a photographing situation is indoors or outdoors;

supplying information on time;

discriminating whether the current time is a twilight time, based on said time information;

controlling said flash unit so as to effect a photographing operation with flash emission when said object luminance is equal to or less than a predetermined level; and

reducing said predetermined level of luminance by a predetermined amount, when the photographing situation is identified as outdoors and in the twilight time.

25. An exposure control method of a camera provided with a flash unit, comprising:

detecting luminance of an object;

discriminating whether a photographing situation is indoors or outdoors;

supplying information on time and information on date;

supplying geographical information;

determining sunrise time and sunset time based on said date information and said geographical information;

discriminating whether the current time is a twilight time, based on said time information and said sunrise/sunset times;

controlling said flash unit so as to effect a photographing operation with flash emission when said object luminance is equal to or less than a predetermined level; and

reducing said predetermined level by a predetermined amount, when the photographing situation is identified as outdoors and in the twilight time.

26. An exposure control method of a camera, comprising:

generating electrical luminance information corresponding to a luminance of an object;

supplying electrical season information corresponding to information of a season;

determining an exposure value for an object based on said luminance information and said season information; and

conducting an exposure operation based on the determined exposure value.

27. An exposure control method of a camera, comprising:

generating electrical luminance information corresponding to a luminance of an object;

counting time electrically, and generating electrical season information indicative of the current season based on the counted time;

determining an exposure value based on said luminance information and said season information; and

conducting an exposure operation based on the determined exposure value.

28. An exposure control method of a camera, comprising:

generating electrical luminance information corresponding to a luminance of an object;

counting time electrically, and generating electrical summer information based on the counted time if it is summer;

determining an exposure value based on said luminance information and said summer season information; and

conducting an exposure operation based on the determined exposure value.

29. An exposure control method of a camera, comprising:

generating electrical luminance information corresponding to a luminance of an object;

counting time electrically, and generating electrical winter season information based on the counted time if it is winter;

determining an exposure value based on said luminance information and said winter season information; and

conducting an exposure operation based on the determined exposure value.

30. An exposure control method of a camera, comprising:

generating electrical luminance information corresponding to a luminance of an object;

counting time electrically, and generating electrical time information indicative of the current time;

determining an exposure value for an object based on said luminance information and said time information; and

conducting an exposure operation based on the determined exposure value.

31. An exposure control method of a camera, comprising:

generating electrical luminance information corresponding to a luminance of an object;

counting time electrically, discriminating whether it is twilight based on the counted time, and generating electrical twilight information when it is twilight;

determining an exposure value for an object to be a predetermined value under in comparison with an exposure value at non-twilight time, in response to said twilight information; and

conducting an exposure operation based on the determined exposure value.

32. An exposure control method of a camera, comprising:

generating electrical luminance information corresponding to a luminance of an object;

counting time electrically and generating electrical date information indicative of the current date;

generating electrical phototaking place information which is information indicative of a phototaking place on the Earth;

correcting said date information based on said phototaking place information;

recognizing current season based on said date information and said phototaking place information and based on the corrected date information and said phototaking place information, and generating electrical season information indicative of the recognized season;

determining an exposure value against an exposure value for an object based on said luminance information and said season information; and

conducting an exposure operation based on the determined exposure value.

33. An exposure control method of a <u>camera</u>, comprising:

generating electrical luminance information corresponding to a luminance of an object;

generating electrical phototaking place information indicating a phototaking place on the Earth;

counting time electrically, and generating electrical time information indicative of the current time;

correcting said time information to a time of the place indicated by said phototaking place information based on said phototaking place information;

generating twilight information relating to sunrise and sunset times based on said phototaking place information and the corrected time information;

determining an exposure value based on said luminance information and said twilight information; and

conducting an exposure operation based on the determined exposure value.

34. An exposure control method of a camera, comprising:

generating electrical luminance information corresponding to a luminance of an object;

electrically counting a reference time, and generating reference time information indicative of a current reference time;

generating latitude information and longitude information corresponding to designated

latitude and longitude of the photographing location;

calculating the current height of the sun based on said latitude information, said longitude information and said reference time information;

determining an exposure value based on said luminance information and said height of the sun; and

conducting an exposure operation based on the determined exposure value.

35. An exposure control method of a camera, comprising:

detecting a luminance of an object;

detecting information on a film which is loaded in the camera;

supplying information on date and time;

discriminating whether or not a current time is a twilight time, based on said date and time information;

determining an exposure value based on said luminance information, said film information and a result of said discriminating; and

conducting an exposure operation based on the determined exposure value.

36. An exposure control method of a camera, comprising:

detecting a luminance of an object;

detecting information on a film loaded in the camera;

determining information on season;

determining an exposure value based on said luminance information, said film information and said season information; and

conducting an exposure operation based on the determined exposure value.